

Petroleum For Humanity



By: Mohammad(Masih) Rezvani .PhD

PETROLEUM for Humanity

Preface

One of the musts for all people who own a car is to check the oil! If you ignore the check you couldnot run car.

Our world is dominated by the need to control oil. It is often the cause of wars. It can make nations extremely wealthy, while shortages can bring economies to their knees.

How did this black, sticky substance come to run to our world?

Petroleum's importance to humankind took a giant leap in the late 1800's when it replaced to coal as the primary fuel for the machines of the industrial revolution. In today's industrialized society , petroleum means power .

It provides the mechanical power to run machines and industries and also the political power that comes from being able to shut down the machines and industries of those who depend on you for their oil supply.

Who are reading this article need to surrender all of their life to the take care of petroleum .

Let's think seriously.....

So I tried to finish this article with a brainstorming question

Introduction

What is oil ? We hear about it almost every day in the news. People around the world are very concerned with the price of oil , Countries who may be at war attempt to cut off the supply of oil to their enemies.

Countries like Iran , Saudi arabia , USA canada and concerned with obtaining a secure supply of oil .

What is different between the petroleum and other commodities which are traded in the world market such as wheat, fish, paper or steel ? all of which are important in our daily lives.

Those are some of the items that we should think about.

Why is oil so Important in this era ?

The answer to this question may already be obvious to you but let's try and see how big a role oil plays in your daily life.

When you got out of bed this morning , the electricity you used to cook breakfast may have been generated from oil-burning generating station, or perhaps your family uses a natural gas-burning stove.

you were able to enjoy breakfast in comfort and warmth because of the oil-burning furnace in your basement .

Next you may have taken a gasoline or diesel powered car(or bus) to school. So , as you can see, before you even started your day , you already used a certain amount of petroleum .

Many of us tend to lose our supply of conveniences for granted. Try and imagine how your life might change if we suddenly lost our supply of oil.

A Source of Energy

Oil's primary importance lies in the fact that it is a very versatile and powerful source of energy.

There are many other energy sources that we routinely use, including firewood, coal, and hydroelectric and nuclear generating stations. All of those sources have their advantages and disadvantages. A clean and renewable source of energy, would certainly be the most desirable.

Oil is a non-renewable source of energy. What this means is that our natural sources of oil are finite, there will come a time when we have used them up. One of the aims of this article is to make you think about how long our present known supplies of oil will last at today's consumption rates.

The reason that oil has such importance is that it provides the fuel that runs the combustion engine.

The internal combustion engine was invented by Karl Benz in 1885-86. Those types of engines are still used today in all kinds of machinery including automobiles, ships, tractors, generators and tanks.

Oil is also the raw material for the fuel that is used in jet engines and some cases to fuel rocket engines to propel spacecraft into outer space.

It should now be obvious why oil plays such a dominant role in today's world. If oil supplies were to be cut off, cars, boats and planes would grind to a halt. We would have to find alternate means of heating many of our homes and generating sufficient electricity. Our personal security

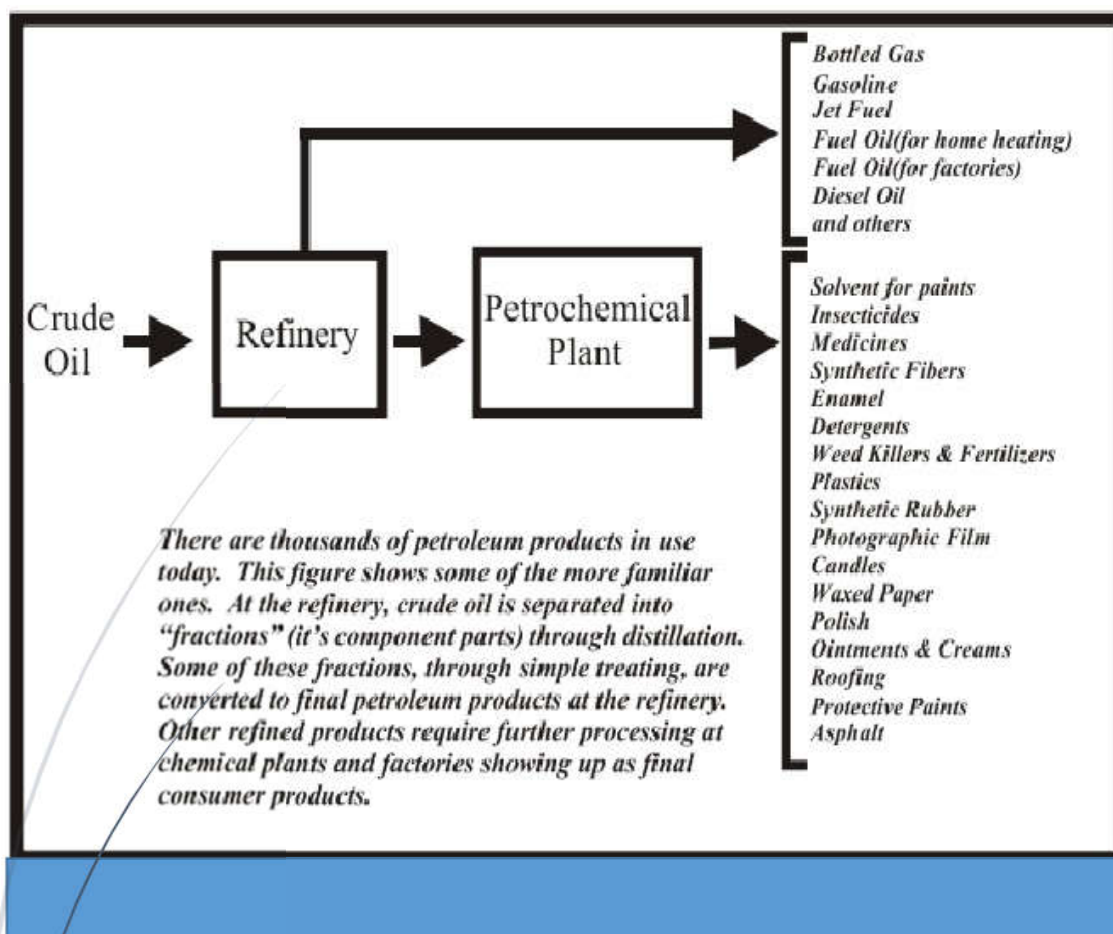
would also be threatened because our military forces and police forces would be largely immobilized.

Oil's principle importance derives from the fact that it fuels the machines of our industrialized society.

Other Uses for Oil

Although oil is primarily an energy source, it also used as a raw material in manufacturing more than a thousand other products in including, Plastics, paints, fertilizers, detergents, cosmetics, insecticides, and even food supplements.

(Figure 1)



Will our life be Dependent on Oil ?

As long as we depend on oil to fuel the engines of the world , it will continue to play a major role in our lives, But research is ongoing in many countires to find ways to harness new sources of energy.

Perhaps on day our cars will have electricity powered engines and run on batteries that must be recharged every few hundred kilometers . Or, perhaps the batteries will draw on the sun's energy and recharge even as we drive.

Who knows what the future holds ???

One thing that is certain, however, is that the air pollution resulting from the combustion of fossil fuels such as petroleum and coal is of increasing concern to the inhabitants of planet Earth. Thus the search for a non-polluting replacement energy source is one of the most important challenges faced by humankind.

The History of Petroleum

Various theories have been advanced over the years as to the origin of petroleum proposing an animal, vegetable,mineral and even meteoric origin.

Today, however,most scientists believe that oil and gas originated in plant and animal matter that accumulated in fine grained sediments at the bottom of ancient seas many millions of years ago .

This theory suggests that oil originated as the remains of countless organisms that either lived in the sea or water deposited there with mud and silt from prehistoric rivers and streams. The remains of those ancient plants and

animals were transformed into oil and gas by bacterial action with heat and pressure resulting from deep burial beneath other sediments.

It seems, then, that the story of petroleum began hundreds of millions of years ago. But when did humans first learn to use Petroleum ??

Did the early civilizations use Petroleum ?

No one knows exactly when humans first used petroleum. It is known, however, that ancient people worshipped sacred fire fuelled by natural gas seeping to the surface through pores and cracks.

The use of thick gummy asphalt to waterproof boats and heat homes was recorded as long ago as 6000BC. About 3000BC the Egyptians used asphalt in the construction of the pyramids, to grease the axles of the Pharaoh's Chariots, as an embalming agent for mummies and medicinal preparations.

There are numerous references to asphalt or pitch (a form of petroleum) in the Bible, including that it served as mortar for the builders of Tower of Babel, was used by Moses' mother to waterproof his cradle of bulrushes and by Noah to caulk the Ark.

In early North America, Indians skimmed oil from the surface of springs using it to waterproof canoes and in the making of war paints.

They taught the colonists to use oil for healing and self-styled "Doctors" bottled "Seneca oil" or "Rock oil" and sold it as a cure-all.

When whale oil, the main source of lamp fuel in the early 1800's, became scarce, a new source needed.

Inventors began to distill illuminating and lubricating oils from natural petroleum seeps and from coal.

Despite the varied and inventive uses being recognized, petroleum was still thought to be a substance of only minor importance.

Some thought it was suitable only for use as a lubricant, patent medicine, asphalt and kerosene (for lamps) and nothing else.

Others even argued that removal of petroleum from beneath the earth's surface would put out the fires of Hades. But changes were occurring in the world. Changes that would make the continued development and growth of the petroleum industry inevitable.

The First Oil Wells

For thousands of years, the only sources of petroleum had been surface seeps or tar pits. These sources were not very productive, so certain individuals decided to look for oil underground, by drilling.

In 1858, one such individual, a 39-year-old carriage maker from Hamilton, Ontario, named James Miller Williams made the first major commercial oil discovery in North America at Oil Springs, Ontario.

Drilling in "Gum beds" in Lambton County, 25 km southeast of Sarnia, he struck oil at a depth of only 18 metres. Williams refined the oil he produced and sold the product as lamp oil. In the following year, Colonel Edwin

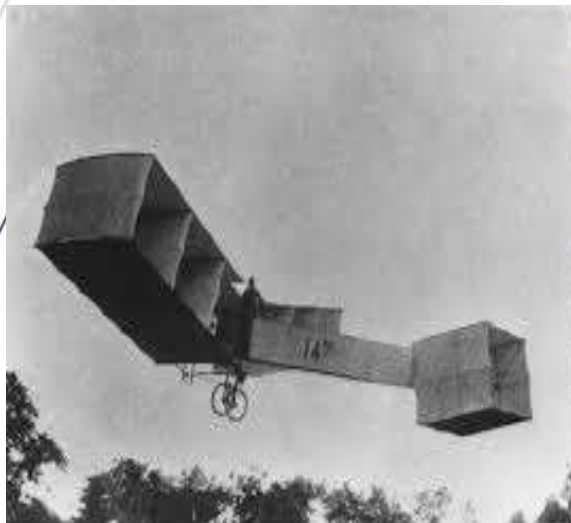
L. Drake discovered oil in Titusville, Pennsylvania by drilling to 21 metres . This discovery signalled the birth of the modern petroleum industry in the United States

The Oil Boom Begins

As a result of the oil discoveries of the 1850's , numerous refineries were built to turn crude oil into kerosene for lamp and into lubricating oils for the machines of the industrial revolution . Oil began to replace coal as the fuel for steam engines.

The invention of the gasoline engine (1885) and diesel engine (1892) allowed inventors of horseless carriages to adopt a new power source to replace steam and electricity Gasoline which had previously been considered a useless by-product of the distillation of crude oil would now take on a new importance as advancements in technology made possible the production of the automobile in early years of the twentieth century .

In 1903, at Kitty Hawk , north Carolina, the Wright brothers utilized petroleum to realize what could only be imagined by previous generation-flight. Since that first flight at Kitty Hawk , north Carolina, petroleum has fuelled every type of aircraft from Lindberg's "Spirit of St. Louis" to today's jumbo jets.



The Present

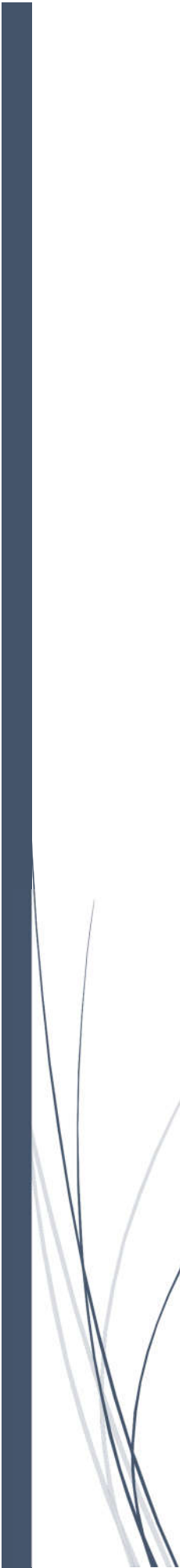
Today, we are well into the space age . but petroleum is still the dominant source of energy used by humankind. this is especially true in the transportation industry .

This versatile fuel that is so easily transported and poured into the fuel tanks of our cars and planes has also been largely responsible for rapid technological advances we have experienced in the past 100 years.

It was less than 500 years ago, in 1519, that Ferdinand Magellan set out with five ships on one of the greatest expeditions in human history, to circumnavigate the world , This voyage cost the lives of most of Magellan's man , including his own, and took three years to complete.

Today, it would not be considered a great accomplishment to go around the world , using modern air travel , on a three week vacation. Indeed the world has become a much smaller place, largely due to petroleum- that smelly, oil substance that had its beginning in ancient seas millions of years before men and women walked the earth .

Differently, We live in a world dependent on petroleum From the cars we drive to the food on our plates, The products and materials we derive from petroleum are fundamental to many aspects of modern society. Such as Petrochemicals products - plastics - the one largest groups of petroleum sector products , is indispensable in our everyday lives. Plastics is the fastest-Growing group of bulk materials in the world.



The manufacture of petrochemicals and their derivatives absorbs an increasing proportion of the world's oil and gas - approximately 15% (13million barrels per day) for oil and 9% (3000billion cubic metres) for gas, that is why much of this energy enters to petrochemicals productions lines.

Petrochemical is an industry that creates and activates about a thousand jobs for every one million tons of production.

A “petroleum play” is full of drama! A petroleum play is a group of oil fields in a single geographic region, created by the same geologic forces or during the same time period. Petroleum play may be defined by a time period (Paleozoic play), rock type (shale play), or a combination of both.

Oil acts as the basis of the world's financial, industrial and economic order is an essential part of the production and final price of goods in all sectors of the economy, from plastic production to chemicals, agriculture and transportation , anyway, I imagine that the best and cheapest way to invest in oil industry is to prevent corruption in this industry in the best way , Because if we want to make a comparison between oil and water, stealing and diverting the flow of oil despite its relate to other sectors of the economy, such as agriculture, transportation, healthcare and education, It's like diverting water flow to cities , making change a thriving economy garden to a financial desert.

Oil as the lifeblood of the industrial world is developing a strategic resource that many countries, from the US to Europe, China and India, are desperately seeking.

Perhaps we have come to realize a little bit that the invasion of the territorial integrity of countries is of economic aspect and does not have a conquest and if we search beyond the pages of history will found , full of prominent figures who have paid a heavy cast for establishing national sovereignty over oil.

With a simple look at oil revenues and calculating the impact of oil revenues on the economy, it is easy to realized that the impact of every one million dollars can have a value added of three to five times the entire economy.

The impact of oil income on a country's economy is illustrated below table.

<i>How does 1 million \$ investment in an economy will added value to the whole economy?</i>				
<i>Each 1 million \$ can effective three to five times on the entire economy and and be able to activate 200-600 jobs depending on the investment sector.</i>				
Food Industry	2.3\$	1.3\$	1.8\$	5.4\$
Construction	2.3\$	1.4\$	1.6\$	5.3\$
Agriculture industry	1.8\$	0.8\$	1\$	3.6\$
Manufacturing industry	1.1\$	0.8\$	1\$	3\$
Shipping industry	1.3\$	0.6\$	0.9\$	2.8\$
Energy	0.8\$	0.6\$	1\$	2.4\$
Mining industry	0.7\$	1.3\$	0.4\$	2.4\$
Public Service	1.5\$	0.3\$	0.5\$	2.3\$
Business services	0.8\$	0.8\$	0.3\$	1.9\$
telecommunications	0.6\$	0.7\$	1.2\$	1.5\$
Trading	0.5\$	0.5\$	0.1\$	1.1\$

What is Our Responsibility to Oil?

You will be Wondered if know more for what is going on down underground that allows us to drill a hole and suddenly have this "back gold" come flowing conveniently to the surface for our used.

Are we drilling into underground rivers or lakes of oil? Caverns filled with natural gas ?

When we reach an understanding of where the oil comes from it will become apparent why oil is found in some and not in others, Why the people living in the oil land are being overshadowed by war, exploitation and cruelty, and the people who don't live in the oil land have a much well life ?

Why do world powers countries focus on oil-rich lands?

Why are the world powers countries trying to vacuum the blood of the people of the Black Gold?

What's under our feets?

The oil industry is the engine of a country's economic growth , that is why people of these lands should support their popular government .

Why the greatest financial corruption lies in the shadow of this divine blessing?

What is the relationship between the identity of these people and oil ? It is as if their identity have hard tie by this godly blessing.

What do we expect from the people involved???